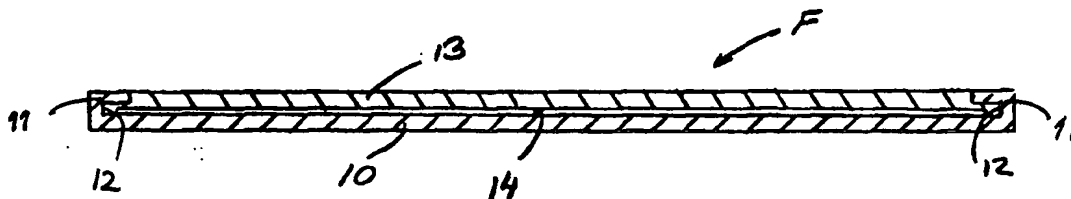


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(54) Title: ARRANGEMENT AT A MOBILE TELEPHONE**(57) Abstract**

Arrangement in connection with an at least partly transparent pivotable protective hatch or flip (F) for a mobile telephone apparatus (1). The said flip (F) is arranged to physically cover at least parts of a keypad (5) on said apparatus (1) for inter alia preventing inadvertent keypad commands. The said flip (F) comprises means at its rear side, i.e. the side that in a closed state thereof is located closest to the keypad (5), that permit a protected attachment or arrangement of personal customization, such as paintings, sticky or non-sticky labels or cards (C) thereat. The customization will thereby also when the flip (F) is in its closed state, be visible from the outside of the flip (F), due to the at least partial transparency of the flip (F).

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ARRANGEMENT AT A MOBILE TELEPHONE

5

Technical Field of the Invention

The present invention relates generally to mobile telephone apparatuses and more specifically to an arrangement in connection with a pivotable protective hatch or flip for a mobile telephone, said flip being arranged to physically cover at least parts of a keypad thereon for inter alia preventing inadvertent keypad commands.

10

Description of the Prior Art

15

Mobile telephones provided with such a flip or a hatch, for covering a key pad thereon, have been used by certain manufacturers for some years. The main purpose with such a flip - being to protect said keypad from inadvertent manipulation - has by other manufacturers been tackled electronically through the use of key pad locks, being initiated by inserting a certain code by using the keypad.

20

In some applications, such as according to EP-A2-492 747, such flips have been used also as a stand for placing the telephone in an upright position e.g. on a table, thereby making it easier to observe.

25

Another application of such a flip has been to protect a display unit on such a telephone from becoming scratched and worn when carried in for example a pocket. According to JP-A-5 030 166 the flip is either partially transparent or provided with a window in order to provide for this function.

30

Hitherto, however, flips on mobile telephones have generally been arranged for the protection of the keypad. In some cases such flips have been made available in more fashionable customized versions. The main reason for the success with such customized versions has probably been that a customized version is easier to recognize as your

35

own together with other mobile telephones of an equally looking kind lying on e.g. a conference table.

In order to achieve an industrial applicability from such customization, the number of articles that has to be produced in each batch of a kind of customized version has
5 to be large. Thus, the above mentioned recognition problem remains.

To obtain a customization, also different kinds of stickers have been suggested. Stickers are however messy in
10 that they require an absolutely clean surface in order to stick where they are initially applied. Even if correctly applied, the appearance of such stickers becomes less attractive due to wear as time goes by. Consequently this is not a solution that is very suitable in the long run.

15

~~Summary of the Invention~~

It is therefore an object of the present invention to provide a mobile telephone apparatus with improved means for customization as well as with means for presentation of
20 specific, personal or otherwise necessary information to get maximum performance from available functions within the telephone itself or the net that it is connected to.

To meet this object a flip of a mobile telephone apparatus comprises means at its rear side, i.e. the side
25 that in a closed state thereof is located closest to the keypad, permitting a protected attachment or arrangement of personal customization, such as paintings, sticky or non-sticky labels or cards thereat. Such customization might in the closed state of said flip, due to a possible at least
30 partly transparency thereof, be visible from the outside of the flip.

To increase the durability of the customization as such when the telephone is frequently used, especially when it is constituted by a painting or a sticky label, the flip
35 may comprise two main parts. One of these parts is the one

visible to the user of the telephone when the flip is closed, the other is the one visible after opening the flip and looking in the direction of the keypad. At least one of said parts is at least partly transparent and is
5 detachable, at least when the flip initially is brought into use.

Users of mobile telephone services today have all kinds of possibilities available within the realm of a telephone subscription. In order to make use of these
10 possibilities, these people, however, normally have to remember different kinds of code combinations by, making use of amongst others the well known signs * and #. Bearing in mind that people today have to remember all kinds of other such codes to gain access to different services in
15 society, the present invention is a relief in that it presents means for making it possible to, conveniently add personal information at the rear side of the flip that might lower the stress level of these people. The details of this advantage will be discussed more in detail below.

20

Brief Description of the Drawings.

Certain preferred embodiments of the invention will be described in more detail below under referring to the enclosed drawings, embodiments thereof, in which,

25 FIG 1 is a general perspective view of a mobile telephone having a flip for protecting its keypad, and

FIGS 2-5 are slightly enlarged and simplified cross-sections along the line X-X in FIG 1 through a flip according to the invention in different embodiments.

30

Detailed Description of the Invention.

In FIG 1 a conventional "flip type" mobile telephone apparatus 1 is shown including a housing 2, which at its front side 2' has an earpiece 3, a display 4, a keypad 5
35 with conventional buttons 6 for dialling and functional

buttons 7, such as on/off, send, clear, etc., and a microphone 8, and on a top side 2" of the housing 2 an antenna 9. In particular, FIG 1 shows a flip F of the kind that the present invention relates to.

5 In FIG 2 an embodiment of a flip F of the general kind shown in FIG 1 is illustrated in a simplified but anyhow more detailed manner. A lower portion 10, having lateral hook-shaped edges 11,, is made of a plastic material with a sufficient structural ligidity and is to be
10 pivotally attached to the mobile telephone housing 2. The hook-shaped edges 11 define slots 12, into which a likewise plastic, correspondingly shaped cover plate 13 can be slid. The portion 10 and the plate 13 constitutes two main portions of the flip F. Between the portion 10 and the
15 cover plate 13 a space 14 is defined in which a sticker or a card can be inserted. Either the portion 10 or the plate 13, or both, may be made of a transparent material, and accordingly such a sticker or card which may be provided with different messages or informative material on its
20 sides providing either a pleasant customized design or purely informative material, may be visible from either side or both sides.

FIG 3 and 4 show two different embodiments of a flip F with the possibility of making either or both sides of
25 the flip F transparent in order to make it possible to customize the flip F in a way pleasant to the human eye. In the embodiment according to FIG 3 the mutual attachment between the cover plate 13 and the lower portion 10 is effected by snap attachment means 16. The attachment may in
30 this embodiment as well as in the other embodiments be permanented with the aid of an adhesive or glue. This may give the advantage that the telephone must be brought to a dealer to be disassembled if a sticker or card is to be changed for a new one. In case of theft this gives the
35 advantage that the true owner of the telephone may be

identified. Another advantage with the use of an adhesive or glue is that it provides a greater structural rigidity to the flip as compared with a flip in two detachable parts.

5 In FIG 4 a more simplified embodiment is shown, requiring a strong adhesive agent A between the cover plate 13 and lower portion 10 of the flip. As before a sticker or a card is to be placed in a space 14 between the plate and the lower portion.

10 Finally, FIG 5 shows an even more simplified embodiment. Here the flip F comprises only the lower portion 10 able to contain simply a card C. The card can be standardized dimensions, e.g. the size of a customary credit card, and can fit in means, e.g. slots 15 created
15 along the sides of the flip.

It appears that the flip F can be of different designs. It should be specifically mentioned that the purpose is to enable the buyer of such a mobile telephone to customize it as he or she likes. The material of the
20 flip is to be such (preferably a mixture of PC and ABS) that it will be paintable so that painting on the rear side of a transparent plastic will give a pleasant smooth exterior whatever structure the painted motive has.

CLAIMS

1. Arrangement in connection with protective
pivotal hatch or flip (F) for a mobile telephone
5 apparatus (1), said flip (F) being arranged to physically
cover at least parts of a keypad (5) thereon for inter alia
preventing inadvertent keypad commands, **characterized in**
that said flip (F) comprises means at its rear side, i.e.
the side that in a closed state thereof is located closest
10 to the keypad (5), that permit a protected attachment or
arrangement of personal customization, such as paintings,
sticky or non-sticky labels or cards (C) thereat.

2. Arrangement according to claim 1, **characterized**
15 **in that** said flip (F) is at least partly transparent.

3. Arrangement according to claim 1, **characterized**
in that said means are constituted by the flip (F), com-
prising two main parts (10, 13), at least one of which is
20 at least partly transparent, and between which said
customization is applicable.

4. Arrangement according to claim 3, **characterized**
in that one of the two main parts (10 or 13) of the flip is
25 attached only to the other main part (13 or 10) of the
flip.

5. Arrangement according to claim 4, **characterized**
in that the two main parts (10, 13) are detachable from
30 each other only initially when the flip (F) is brought into
use.

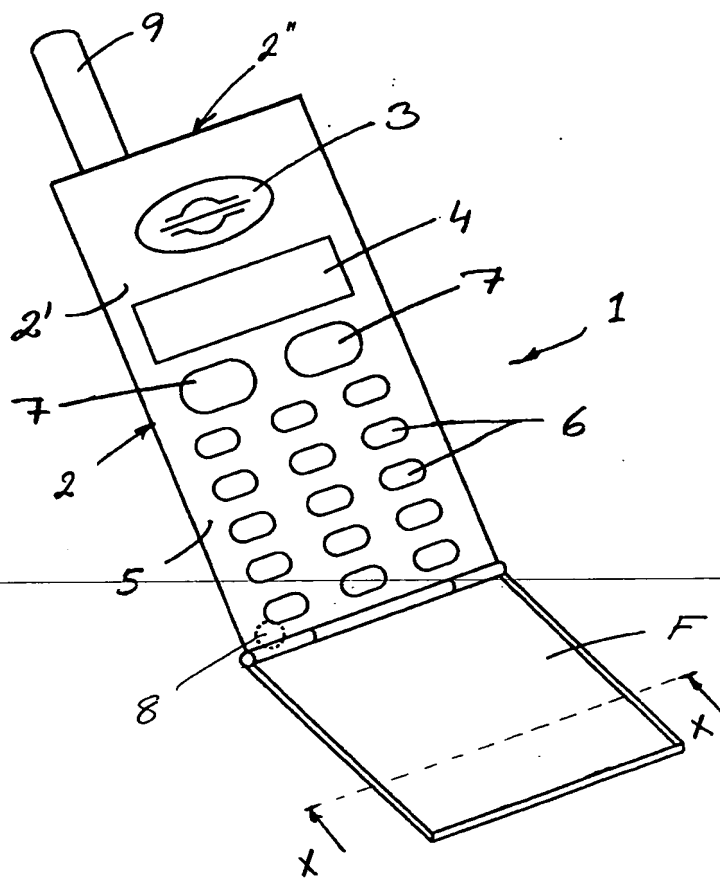
6. Arrangement according to anyone of the preceding
claims, **characterized in that** the two main parts (10, 13)
35 are slidably attached to each other.

7. Arrangement according to anyone of claims 3 - 5, characterized in that the two main parts (10, 13) comprise coinciding snap attachment means (16).

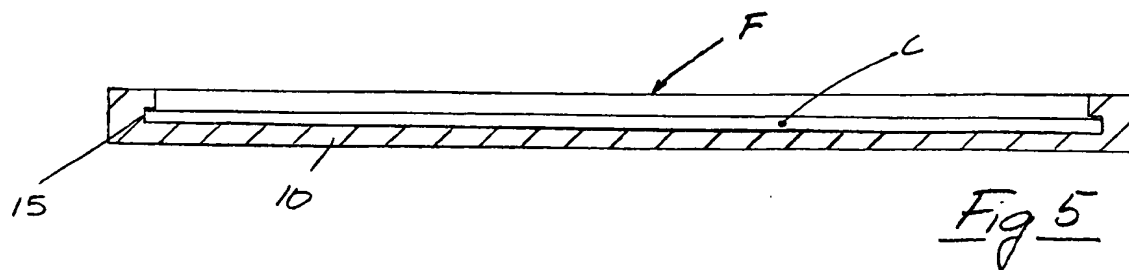
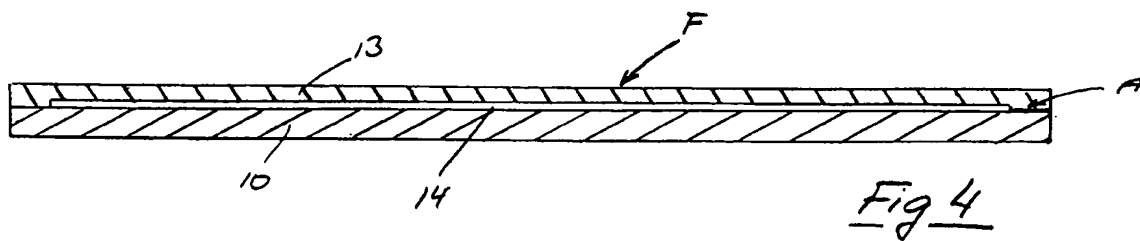
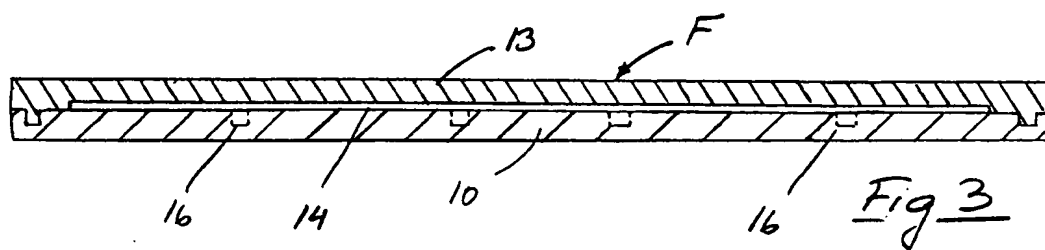
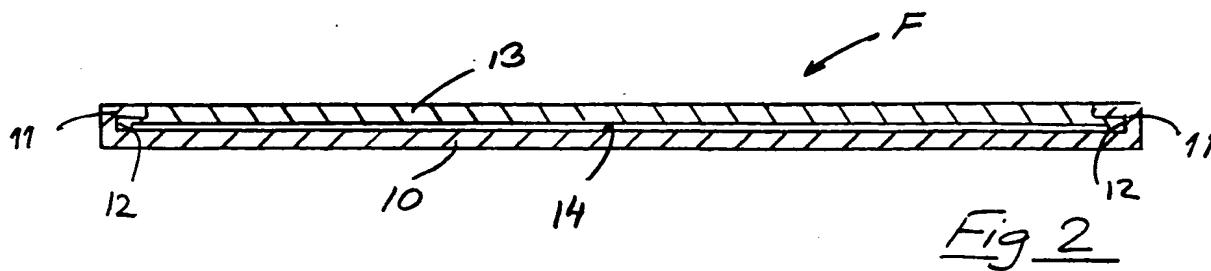
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8. Arrangement according to anyone of claims 3 - 6, characterized in that the two main parts (10, 13) are permanently attached to each other with adhesive or glue.

FIG 1



2/2



INTERNATIONAL SEARCH REPORT

International application No.

PCT/SE 98/02228

A. CLASSIFICATION OF SUBJECT MATTER

IPC6: H04M 1/02, H04M 1/21

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC6: H04M

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

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Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

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C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 0275996 A2 (SIEMENS AKTIENGESELLSCHAFT BERLIN UND MÜNCHEN), 27 July 1988 (27.07.88), column 2, line 12 - line 18	1
Y	--	2-8
Y	EP 0492748 A2 (MANNESSMANN AKTIENGESELLSCHAFT), 1 July 1992 (01.07.92), column 2, line 56 - line 58, figure 1	2-8
Y	GB 2252219 A (TELESOUND (TAIWAN) LTD), 29 July 1992 (29.07.92), figures 1-4, abstract	2-8
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Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 5655018 A (S. M. ESTEVEZ-ALCOLADO DE HOLL ET AL), 5 August 1997 (05.08.97), column 2, line 53 - column 3, line 58, figure 2 --	2-8
Y	US 5113435 A (Y-H CHEN), 12 May 1992 (12.05.92), column 1, line 6 - column 2, line 42, figures 1-3 --	2-8
Y	US 5664013 A (MARKKU J. ROSSI), 2 Sept 1997 (02.09.97), column 3, line 60 - column 4, line 42, figures 2-3 --	2-8
Y	US 4291475 A (HANS L. SCHOEMER), 29 Sept 1981 (29.09.81), column 1, line 44 - column 4, line 25, figures 1-5 --	2-8
P,X	GB 2325371 A (RADIO DESIGN LIMITED), 18 November 1998 (18.11.98), page 4, line 11 - page 17, line 8, figures 1a-7 -- -----	1-8

INTERNATIONAL SEARCH REPORT
Information on patent family members

02/02/99

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Patent document cited in search report			Publication date	Patent family member(s)		Publication date
EP	0275996	A2	27/07/88	DE	3882721 A	09/09/93
EP	0492748	A2	01/07/92	DE	4041988 A	02/07/92
				FI	916019 A	22/06/92
				JP	4276957 A	02/10/92
GB	2252219	A	29/07/92	GB	2265093 A,B	22/09/93
US	5655018	A	05/08/97	NONE		
US	5113435	A	12/05/92	NONE		
US	5664013	A	02/09/97	NONE		
US	4291475	A	29/09/81	NONE		
GB	2325371	A	18/11/98	GB	9806326 D	00/00/00
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				SE	9801564 A	15/11/98